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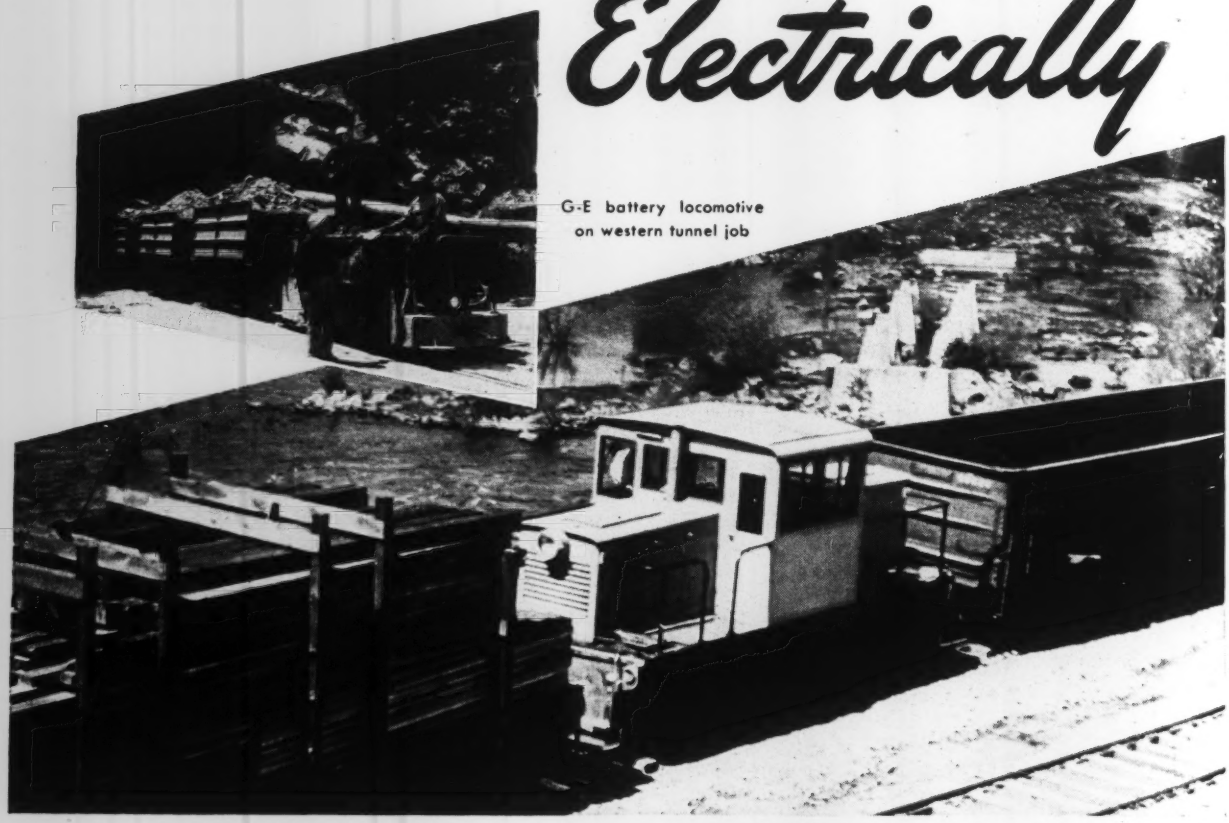
ENGINEERING NEWS-RECORD

DECEMBER 2, 1948

Nailable light-gage steel framing is used in [illegible] at Bear Brook, Conn.

A McGRAW-HILL PUBLICATION

consolidate haulage . . . cut costs *Electrically*



G-E battery locomotive on western tunnel job

G-E 45-ton diesel-electric which helped build Friant Dam

Versatile G-E Locomotives Handle Both Equipment AND Materials; Increase Contractors' Profits

More and more contractors are finding out that General Electric locomotives—diesel-electric and straight electric—will cut haulage costs because of the variety of loads they move. Besides hauling timber, rods, piles, heavy equipment—everything needed on a large job—they can also be relied upon to meet your exacting aggregate schedules. Operating costs are low, and their availability for service is 90-95 per cent.

Next time you're bidding a big job, ask your General Electric representative to help you estimate haulage costs with a G-E locomotive. If the economics work out in favor of this type of haulage, he will help you select the right locomotive for the job from one of G.E.'s standard construction types.

Apparatus Dept., General Electric Company, Schenectady 5, N. Y.

ELECTRIFIED CONSTRUCTION
BETTER PRODUCT
LOWER COST

GENERAL ELECTRIC

THE CONSTRUCTION WEEK

SUBURBAN SANITATION—If all goes according to plan, the Ohio state legislature will receive a proposal next January to create a Cuyahoga County sewer authority. The normal reason for setting up an authority-type organization—to obtain the benefits of revenue bond financing— is bolstered by the need for widening jurisdiction of sanitary control beyond the city limits of Cleveland. Suburbs are bursting their seams, are not supplied with essential utilities, and water wells subject to pollution, septic tank overflows and the like create a health menace.

RECORD IN SIGHT?—A few days ago a telegram from the Walsh Construction Co. at Oroville, Calif., asked ENR for the "world record drive for 24 hours, also for week, in 25-ft. horseshoe tunnel, hard granite formation." Since 25-ft. tunnels are not driven every day, we were unable to do more than provide records for smaller tunnels. We intend to keep our eyes on Oroville.

ESCALATOR CLAUSE—One way to cope with the gyrations of construction costs is contained in an Akron, Ohio, proposal for bids on a municipal pumping station. The city directs special attention to an article in the contract which "provides for adjustment of the final total payment for bid items by a stated simple formula based on variations occurring in the ENGINEERING NEWS-RECORD building cost index, with departure from the basis of bid prices limited to 20 percent."

STORING CEMENT—The fact, unearthed in ENR's survey of the cement situation (Sept. 23 issue, p. 10), that American mills have cement to export in the Winter and early Spring, after their plant storage is full, is being exploited by some cement users. They are adding to their own storage facilities. This is reflected in the increased business coming to bin manufacturers. When cement was in ample supply and regular deliveries could be counted upon, ready-mixed and concrete products plants could get along with about 300 bbl. storage capacity. They are now increasing this to 800 to 1,000 bbl. for standby storage and to be ready to handle unexpected shipments that may come from their cement suppliers.

MONEY IN SILT—As work progresses on Pennsylvania's Schuylkill River desilting program it becomes apparent that the $35,000,000 project may be self-liquidating. The Commonwealth originated the work for the purpose of eliminating acid pollution and unsightly black deposits of silt and coal-mine waste. These deposits are running about 70 percent recoverable anthracite. Opportunistically, Pennsylvania is arranging to supply users of powdered coal.

WEATHERMAN ON THE SPOT—New York's Department of Sanitation is flirting with the idea of engaging a commercial weather-forecasting service to give it 48 hours advance notice of the coming of snow. Other cities are reported to have taken that step. This puts the U. S. Weather Bureau on the spot. Of late, at least in the New York metropolitan area, its reputation has been repeatedly undermined by radio broadcasters telling their listeners that the Weather Bureau said the day would be fair when the listener could see that rain was falling, or that rain could be expected when all could see that there were few if any clouds in the sky. Commercial forecasters are capitalizing on these poor deductions, but whether they can score any better is a moot question.

VERTICAL DECENTRALIZATION?—Much is being said these days about decentralization of population and industry, by which most people mean spreading out our cities. But Robert W. Dowling, president of the City Investing Co., New York, told the National Association of Realty Boards recently that this is not decentralization, it is just "sprawling". Mr. Dowling wants our cities rebuilt vertically. This he says will provide just as much light and air as sprawling "aimlessly over the landscape."

DOUBLE BARRELED SPENDING—Marshall Plan countries, required to withdraw from circulation amounts of their own currencies equal to the ECA grants they receive, are beginning to spend some of these so-called "counterpart funds". Reconstruction thus benefits twice—once from the dollar grant and once from the local currency spending. Austria has just been given the go-ahead on 330.5 million schillings (about $33 million) of its counterpart deposits for use on roads and postal and telegraph facilities. About twice this amount is still available, which Austria would like to spend on hydro-power projects. ECA has also released French funds in the sum of 1.8 billion francs for power plants and 85 million francs for compressor plants at coal mines. Italy has been given tentative approval to spend 55 billion lira ($88,000,000) for public works projects of various types.

Engineering Facts about

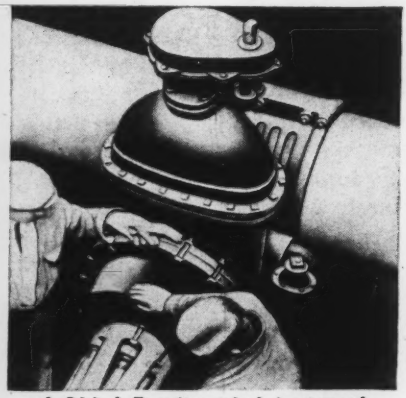
Johns-Manville TRANSITE PRESSURE PIPE

Making Large Service Connections

READY adaptability to standard waterworks practice is an advantage of Transite* Pressure Pipe which is of special importance when making large service connections. Thousands of such connections are in service today, installed in Transite supply and distribution lines with standard equipment and tools under a variety of installation and working conditions.

For tapping the line under pressure, conventional tapping sleeves, tapping valves and drilling machines are generally used. The sleeves are first loaded and caulked in the usual manner. Sleeves to fit all sizes of Transite Pressure Pipe are available from several manufacturers. Tough and strong, the pipe wall is, nevertheless, readily drilled; Transite's unusual machinability assures a clean cut.

In cases where the line can be temporarily removed from service, a commonly used method of providing large connections is to insert into the line a fitting† such as a tee having the required outlet size. To do this, a section of pipe is first removed from the line. The Simplex Coupling permits quick removal and with a minimum of trench excavation. Two stubs of pipe are then cut from this section and inserted into the bells of the fitting to form an assembly of equivalent length to that of the section removed. No problem arises in joining stub ends and fitting, since lead or compound joints are readily made with Transite. Replacement of the assembly in the line is easily and quickly made with the standard Simplex Couplings.

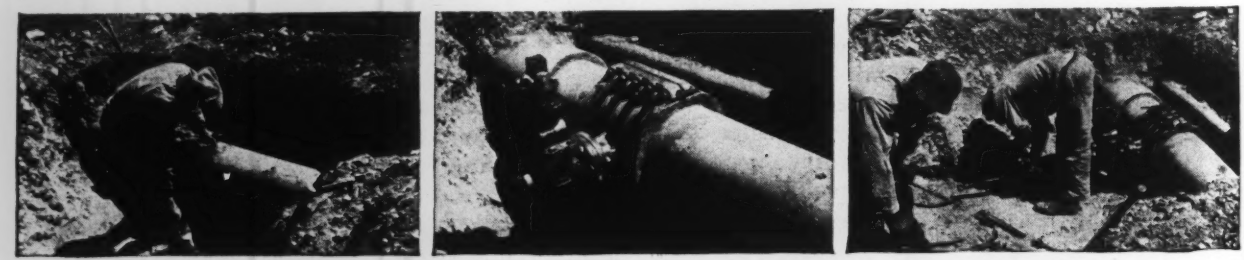


A 24-inch Transite main being tapped under full working pressure for a 20-inch branch connection.

A method sometimes used for making connections when the line is under pressure is the use of service clamps of the type equipped with double straps. These may be used for making service connections larger than those recommended for corporation stops inserted directly into the wall of the pipe or where multiple corporation stops are not used. After the service clamp and corporation stop are attached, the pipe wall is drilled with conventional drilling tools. Service clamps are not used for outlets exceeding one-quarter the diameter of the street main, nor larger than 4".

A previous advertisement in this series discussed tapping Transite Pressure Pipe for small service connections. A reprint is available on request. Address Johns-Manville, Box 290, New York 16, N. Y.

†The run of the fitting should have bell ends. Enlarged bells are used for class 150 pipe over 8" in diameter.



Conventional methods are used for making large service connections in Transite lines. Here are shown a tapping sleeve and valve being installed on a 12" line under pressure for a 4" outlet.

***Transite is a registered Johns-Manville Trade Mark**

JOHNS-MANVILLE JM PRODUCTS

Calling All Male Mosquitoes!

MALARIA ERADICATION has depended in large measure on such construction operations as draining, ditching and clearing of breeding grounds. But down in Cuba recently, male mosquitoes have been seduced to death. Recording the love-call of a malaria-carrying Anopheles albimanus female, Dr. Morton C. Kahn of the Cornell Medical School then played it back through a powerful amplifier set in a mosquito-infested swamp. The deadly siren attracted hordes of male mosquitoes, who were promptly destroyed by an electrified screen. At the conclusion of the test period, only a few males remained within a two-mile radius. By eliminating the males, the mosquitoes' eggs cannot be fertilized, and this curtails breeding. Should it be practical to employ this simple process for breaking the life cycle of the mosquito, malaria control would be greatly simplified. Such progress might deprive someone of a trenching and drainage job, but a malaria-free country would more than make up for it in the other construction jobs that would be required. Sound the siren!

AEC and Sanitary Engineers

IT IS GRATIFYING to note that the Atomic Energy Commission has adopted a more liberal attitude toward acquainting sanitary engineers with environmental health problems relating to nuclear fission operations. In making it possible for Arthur E. Gorman, sanitary engineer, and Abel Wolman, consultant, of the AEC, to outline the nature and scope of these problems, the commission is promoting an effective educational program from which it should derive great benefits. It is no secret that there are many public-health problems associated with nuclear fission operations. How grave these are has recently been emphasized by Messrs. Gorman and Wolman. But by virtue of their clear definition of these problems before the profession, they have taken an important first step toward enlisting the skills and thinking of this group in planning measures of control. Already underway is important sanitary-engineering research in university laboratories and other centers relating to the disposal of atomic-wastes. Meantime, plans have been set in motion to provide special training for sanitary engineers in matters relating to nuclear fission. These are definite signs of progress. It is certain that the Atomic Energy Commission and the public will benefit by having taken into its confidence a group of specialists whose record shows many contributions of distinguished public service.

A Civic Responsibility

ENGINEERS CAN BE AN EFFECTIVE FORCE in shaping public opinion on local issues involving engineering. On many subjects such as traffic planning, re-zoning, and improvement of transit facilities they can help the general public to reach sound conclusions. Evidence that this is no idle dream can be found in Detroit, where the Civic Affairs Committee of the Detroit Engineering Society has made the plan work. In recent comment on the procedure followed by that organization, S. M. Dean, president of the society, said that widespread interest in the engineers' proposals was attained by staging a press conference at which their findings were explained to representatives of local newspapers. What was done in Detroit can be done elsewhere. But it cannot be accomplished by wishful thinking. It will take hard work and time. Yet, the very real need for this type of action is a civic responsibility that engineers should accept willingly.

San Francisco Bay Crossing

A GREAT DECISION is in the making in San Francisco. It relates to a new traffic crossing of the Bay and it can be made on the basis of quite definite facts, thanks to Ralph Tudor, chief engineer of the new Division of San Francisco Toll Crossings, who rounded up an engineering organization and a board of consultants that plunged into the investigation with almost emergency-type fervor, and rendered a report in less than a year. Measured by service to traffic, reduction of congestion, cost or time of completion, a bridge parallel to the existing one shows up better than a combination causeway and tube, the other possibility. Unless the question of vulnerability to bombing is successfully raised, another San Francisco bridge is likely to be under construction about two years hence. As on evidence of the times, it will cost about twice as much as the existing one, opened in 1936.

NEWS BRIEFS

Hospitals — Irons and Reynolds Const. Co., WASHINGTON, D. C., were successful bidders at $2,045. 300 on a new Kings Daughters hospital at STAUNTON, VA. . . . A hospital construction program of $8,000,000 is under way at DULUTH, MINN., including five projects, topped by a proposed $4,000,000 veterans hospital. . . . A $4,000,000 construction program is planned for the East Mississippi State Hospital MERIDIAN MISS. . . . Within a month bids will be asked for a 200-bed, $5,000,000 VA hospital at TUPELO, MISS. . . .Public Welfare Director H. S. Caulfield and Hospital Commissioner F M. Grogan of ST. LOUIS, MO., are urging the immediate construction of a 300-bed addition to the city infirmary.

Schools—a $42,000,000 long-range building program for Oklahoma state colleges and universities will be placed before the legislature next month by the state Regents for Higher Education. . . . The Board of Education of PHILADELPHIA, PA., has announced that construction of five new public schools at a cost of about $7,500,000 will be authorized soon. Six new schools are now being built, at a cost of $10 000,000. . . . at WILMINGTON, DEL., the Board of Education plans four new schools and alterations and additions to present ones. . . . University of Pennsylvania, PHILADELPHIA, has announced a $22.-000,000 building program and completion of sketches for the new $2,000,000 Wharton School. . . . bids are to be received at Virginia Polytechnical Institute, BLACKSBURG, VA., for three dormitories which are to cost more than $1,000,000 when completed.

Housing—Small homes are featured in a development of 100 four-room houses started in SPOTSWOOD, N. J., by Plymouth Bldg. Corp. and in a 66-dwelling project completed in SADDLE RIVER Township by Apex Development Corp. . . . Leonard and David Ross are planning a community of 94 homes, priced from $38,500 up, for GREAT NECK, LONG ISLAND, N. Y. . . . E. Tucker Carlton, architect, is working on plans for two apartment projects to cost almost $5,000,000 in HENRICO COUNTY, VA., near RICHMOND. . . . S. D. Walker, Inc., announces a $1,000,000 residential project at BRIGANTINE, N. J., and Edwards and Green an $800,000 apartment at BORDENTOWN, N. J. . . .Widener Park Inc., PHILADELPHIA, PA.. plans a $16,-000,000 apartment development there. . . . Rosoff Bros. will build a $3,500,000 apartment development in HADDON TOWNSHIP, N. J. . . . Architectural plans for Parkside House, to be built in the Bronx by the New York City Housing Authority, were filed Nov. 22. This is one of the projects in Mayor O'Dwyer's program of public housing without cash subsidy. It will accommodate 2,834 persons in 868 apartments. It will be so situated as to overlook Bronx Park and the Bronx Botanical Gardens.

Industrial construction — International Harvester Co., has bought 33 acres at KANSAS CITY, MO., for a new $8,000,000 plant. . . . C. W. Roberts. head of the Georgia Power Co.'s MACON division, has announced plans to start construction next month on $10.000.000 Furman Shoals hydroelectric development on the Oconee River. . . . Hercules Powder Co., WILMINGTON, DEL., has plans for a large anhydrous ammonia unit at HERCULES, CALIF. . . . BARRETT & HILP, SAN FRANCISCO, has a contract to erect a $900,000 hardboard manufacturing plant for Masonite Corp. at UKIAH, CALIF. . . . Atlantic Refining Co., will build 45 service stations between PITTSBURGH and HARRISBURG, PA., at a cost of over $1,000,000. . . . Arizona Portland Cement Co., will establish an ultimately 6,000 lb.-a-day cement plant at RILLITO, ARIZ. Fisher Contracting Co., PHOENIX, has $1,300,000 contract to start. . . . DAYTON, OHIO, Power and Light Co., is planning a 6-year, $84,-000,000 construction program. . . . A 15-year, $386,000,000 expansion program is planned by the Union Electric Co. of MISSOURI. . . . Western Electric Co.'s new telephone factory at INDIANAPOLIS, IND., will cover 23 acres and cost $5,000,000. . . . John C. Bairight is planning a $7,250,000 hotel for EDMONTON, ALTA., to be financed by Montreal and Toronto capitalists.

Bridges — Plans and specifications have been prepared for the proposed $1,250,000 viaduct at BIRMINGHAM, ALA. on 26th Street from 1st to 3d Aves. It will be 1,870 ft. long, including approaches, with four 12-ft. traffic lanes. . . . The QUEBEC provincial government has given the Dufresne Const. Co. a contract for doubling the width of the trafficway on QUEBEC bridge.

Highways—Griffenhagen Associates, Chicago consulting engineers, have advised the ILLINOIS Highway Traffic Problems Commission that it will cost $5.5 billion to place the state highway system in first class condition and to maintain it that way for ten years. . . . Eight road projects to be bid on at AUSTIN, TEX., on November 30 total an estimated $7,000,000. . . . Proposals for construction of a 100-mile toll turnpike between OKLAHOMA CITY and TULSA, OKLA., and the construction of a parallel free road between SAPULPA and TULSA have been approved by the Oklahoma Turnpike Authority and the Oklahoma State Highway Commission. Unofficial estimates of the cost have run as high as $35,000,000. . . . U. S. Highway 81, principal north-south traffic route through central TEXAS, will be made into a four-lane highway as rapidly as right-of-way is furnished by the counties.

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The Cover

Rapid construction of the 300-family McConaughy Terrace project of the New Haven, Conn., Housing Authority is being accomplished through use of nailable steel members.

Fabricated panels of light-gage steel framing, to which collateral materials can be nailed, are quickly erected with the help of a small truck-mounted crane.

Steel members, produced by the Stran-Steel Division of Great Lakes Steel Corp., include studs in exterior walls and interior partitions, floor and roof joists and corrugated steel sheets to receive second-floor concrete slabs.

Good jobs for engineers offered by N. Y. State

It is announced that the New York State Department of Public Works has immediate openings for more than 500 new engineering and architectural personnel in positions ranging in salary from 1,725 to $8,537 a year. Vacancies exist not only in the department's main office in Albany but also in its ten district offices in Albany, Utica, Syracuse, Rochester, Buffalo, Hornell, Watertown, Poughkeepsie, Binghamton and Babylon.

In announcing the list of vacancies, Bertram D. Tallamy, State Superintendent of Public Works, said, "Here is a double barreled opportunity for qualified workers who wish to enter civil service—a chance for employment with good pay and security".

ENGINEERING NEWS-RECORD

DECEMBER 2, 1948 VOL. 141 NO. 23

Study shows half U.S. cities lack adequate building codes

Many municipalities have no building regulations, others operate under antiquated laws, standards bureau finds—Little effort being made to modernize ordinances

By F. S. Merritt

Nearly half of all U. S. cities either have no building codes at all or are operating under regulations ranging from 20 to 44 years in age less than 10 percent are doing anything about it.

Despite continuing pressure for revision and modernization, only 175 of the nation's 2,094 cities with populations of over 5,000 are now revising their codes, 26 are contemplating major revisions, 29 have started work on drafting new codes, and five are "thinking about it," according to a survey just completed by the National Bureau of Standards, Building Technology Division.

Out of the 2,094 cities, the survey showed, 385 had no codes at all; 18 were covered only by state regulations; 65 were governed by fire-limits ordinance only, and 88 had merely a permit ordinance. Of the cities that had regular codes, 184 had codes over 25 years old, 418 were over 20 years old, and one code is 44 years old.

Larger cities are not so delinquent in keeping their regulations up to date as smaller ones. Of the cities with over 100,000 population, only 13 percent have codes more than 20 years old and 27 percent more than 15 years old. Furthermore, nearly 25 percent of this group are engaged in major revisions.

This would seem to indicate that the smaller cities do not modernize their codes because they cannot afford the cost. Besides the expense of formulating new regulations — which could be avoided by adopting a model code—the cost of publishing proposed ordinances in full in newspapers for public notification may be prohibitive for the smaller communities. A remedy for this situation is foreseen in a proposed model state law permitting municipalities to adopt existing codes by reference (ENR Nov. 18, p. 3).

Of course, the age of a code is not necessarily a measure of the modernity of the regulations. Almost all the codes have been amended many times.

Large cities getting new codes this year, the survey showed, include Oakland, Cal.; San Diego, Cal.; Worcester, Mass.; Minneapolis, Minn.; Philadelphia, Pa.; and Norfolk, Va. Last year, codes were adopted by Los Angeles, San Francisco, Kansas City, Kan.; Somerville, Mass.; Detroit, Kansas City, Mo.; Albany, N. Y.; Tulsa, Okla.; Portland, Ore.; Pittsburgh, Pa.; Dallas, Tex.; and Seattle, Wash.

Among the larger cities, Fall River, Mass, (population 115,400) holds the record for antiquity. Its code is 44 years old. Jersey City, N. J. (population 301,200) is second, with 41-year old regulations. Neither municipality reported plans for major revision.

Those cities that are modernizing t' eir codes are not finding it easy.

For example, Columbus, Ohio, which adopted its present building regulations in 1930, attempted a major overhauling about seven years ago. A number of committies were named by the city council, and after they had spent considerable time in preparing various sections, public hearings were held. Then, there followed four weeks of such hot and angry wrangling between code writers, city council and labor organizations that the project was dropped.

Columbus has continued to operate under its heavily amended 1930 code, but recently J. S. Stith, chief building inspector, notified the city council that he is writing a new code, which should be ready for submission in a few weeks.

Work on a new code for Akron, Ohio, started in 1944. Prepared under the supervision and direction of James Easton, superintendent of building inspection, it was completed more than a year ago. Public hearings are still being held by a city council committee, although it is hoped they will be terminated by Jan. 1. The code will then go before the full council, which can either accept, amend or kill it.

While many cities follow a similar procedure—permitting the local building official to prepare a new code—others prefer to appoint or hire one or more consultants to do the job. A major objection to code writing by

(*Continued on* p. 15)

NLRB decides secondary boycott case

This week, for the first time under the Taft-Hartley Law, the National Labor Relations Board asserted jurisdiction over a secondary boycott growing out of a strike of carpenters engaged in remodeling a house. In so doing, NLRB considered that it must not ignore, because of their minor affect on interstate commerce, matters like secondary boycotts which Congress made a special target in the law.

This has been the view of NLRB's general counsel, Robert N. Denham, on the question of how far the board should reach in applying its authority. Thus, the decision against Local 74 of the carpenters' union and its business agent, Jack Henderson, is his victory.

While concurring in the 4-1 decision, Chairman Paul M. Herzog paid respect to the independent authority of the general counsel. Because Denham saw fit to prosecute the case, Herzog said, he believed the board was duty-bound "to complete the task by asserting jurisdiction."

Herzog, who has favored ignoring labor disputes which were local in character said Congress intended to prevent secondary boycotts even where they affect only local enterprises. He would not apply the federal power "to so local and so diminutive a controversy" if he thought the board was permitted discretion in the matter.

Member John M. Houston saw no compulsion in the legislative history of the law to take jurisdiction over all construction industry cases. He dissented.

Henderson called four union carpenters off a house-remodeling job in Chattanooga, Tenn., on Aug. 21, 1947, because non-union employees of Watson's Specialty Store were installing floor covering bought from the store. The union then picketed the store, which is one of a chain operating in seven states.

Money assured Detroit for water supply

Decision was taken two weeks ago and just announced by the Detroit Board of Water Commissioners to provide the necessary funds for a 10-year $35,000,000 water-supply improvement program.

In the hopes that the work can be done on a pay-as-you-go basis, water charges to all consumers will be increased 14 cents per 1,000 cu. ft. But because of the possibility that the resulting revenue may not be sufficient at some particular stage in the work, authorization was also given for issuing $10,000,000 in bonds. In effect, authorized bonds will serve as insurance during the pay-as-you-go program.

The 14 cent increase in water charges will figure 9 percent for the smallest domestic user, and nearly 29 percent for the largest industrial customer. The average for all customers is a rate rise of about 20 percent. Detroit's charges have been relatively low—78¢ per thousand for the first 10,000 cu. ft., down to 28 cents per thousand for all over 100,000 cu. ft.

Detroit's need for water-system improvement and expansion rests on its great growth both industrially and population-wise. During the war years, an $18,000,000 program was planned, and about $4,500,000 in contracts has already been let. But a re-examination of the situation has shown that the sights were much too low—that $70,000,000 must be spent by 1970, and that half of this expenditure must be scheduled for the next 10 years.

A basic reason for the change in objective is that, contrary to expectation, per-capita water consumption has increased since the "abnormal" war years. The figure was 130 gpd. in 1942. It was 144 in 1947, and will be 14[illegible] this year. Also with an average delivery rate of about 250 mgd. throughout the year, an all-time daily record of 572 mgd. was set in August of this year. Maximum hourly pumpage has gone as high as 800 mgd. When all facilities available and under construction are working, maximum hourly pumping capacity will be at a 940 mgd. rate, but this is sufficient only to 1951.

Filter-plant capacity is also likely to be inadequate sometime between 1951 and 1956 as indicated by the estimated growth in the maximum daily pumpage figure to 675 mg. in 1970.

Plans include pumping station

The biggest item in the proposed program is a new pumping station in the northeast part of the city to supplement the Springwells station built in the southwest section between 1926 and 1932. Tunnels from the old Waterworks Park treatment plant on the Detroit River bank supply these stations. A new 4-mile tunnel to the Northwest Station will be the first facility to be built under the new program. Contracts will be let next year. A new 30 mg. covered reservoir is now about complete at the northeast site.

The Northeast pumping station and tunnel will cost about $23,500,000. Some $8.8 millions will be spent for new mains, $1.7 millions for expansion of the Springwells station and about a half million dollars at Waterworks Park. The last named improvement will not be started until the other facilities are available for continuity of service.

PERSPECTIVE . . . .

Services for suburbs

An answer to the problem of what to do about providing essential services to suburban communities outside of city limits may be in the making at Cleveland, Ohio.

Facing the mushroom growth of suburban communities, Cleveland city officials, planning leaders and commissioners of Cuyahoga County are now preparing to go to the state legislature in January and ask for creation of a metropolitan authority to handle sewage disposal and water supply in the metropolitan area. Such an authority would include the county's 55 municipalities and five townships plus other areas that may request admission.

The Regional Planning Commission, which will make the presentation to the legislature, sees a number of possible flaws in the idea—the biggest of which would be that membership in such an authority would be voluntary.

However, the commission envisions a program involving the expenditure of $53,000,000 — more than half of it to be spent on immediate projects and the remainder over a 10 year period—that would provide a unified disposal and water supply system to cover the entire area.

A preliminary survey by the commission's Committee on Sanitary Engineering points up a garbled sanitation situation very similar to that in other metropolitan areas in the United States.

The basic problem being faced by the county is the growth of subdivisions where no sanitary sewers or public water supplies are provided and where building lots are too small (50x100) for proper leaching of septic tanks. Other complications include: Cuyahoga County has 60 separate political subdivisions, 41 of which have sanitary sewers and 51 have public water service; Cleveland itself has a combined storm and sanitary sewer system, most of the other municipalities have separate systems. Nineteen treatment plants serve 137 square miles of the county's 460 square mile area. The city provides water service for 47 of the communities and private wells are used entirely in eleven of the subdivisions.

There is hardly a subdivision which does not discharge some of its sewage into an adjacent area or through which the sewage from another subdivision does not flow—a cause for constant intercommunity bickering.

And to cap the arguments in favor of unified systems, Army Engineers, called in recently to survey the erosion taking place in public property fronting Lake Erie, said that conservation measures could be taken but that it would be hard to justify their cost when pollution was so bad along the lake front that it wasn't safe for swimming.

Regional offices closed in ASCE economy move

As a result of the decision of the Board of Direction of the American Society of Civil Engineers to reduce the society's expenditures for regional offices (ENR Oct 21, p. 6), the Chicago and Los Angeles offices closed.

The Los Angeles office was closed in October to release Walter E. Jessup for the editorship of CIVIL ENGINEERING following the resignation of Donald D. King, editor of that journal, to go into business for himself.

George S. Salter, who has been in charge of the Chicago office since it was opened a year or more ago, is leaving the ASCE staff to take up other work.

The Eastern regional office at Washington, D. C., will be retained and its tivities carried out by a part-time assistant at Washington, aided by members of the society headquarters staff fro.n New York.

National Reclamation Assn. holds lively convention in Oklahoma City

Association president touches off accusation and denial exchange on Bureau of Reclamation powers and NRA tactics

By John McWilliams
News Correspondent

Oklahoma City—The National Reclamation Association, for the first time in its 17-year history, is on record as favoring appropriation of federal funds for building multiple-purpose projects with generation of hydro-electric power and non-duplicating main transmission lines "where necessary" to market such power.

This resolution was adopted during the last sessions of a three-day (Nov. 16-18) national convention held at Oklahoma City, although out-of-convention clashes between officers of the U. S. Bureau of Reclamation and leaders of the association indicated all is not peaches and cream where the policies of each group are concerned.

Other resolutions asked that:

1. The formula for repayment and allocation of costs as non-reimbursable should be liberalized.

2. The practice of making long-term contracts under which the U. S. would sell water perpetually as a public utility be terminated.

3. Federal control over irrigation projects and facilities be confined to procedures necessary for the protection of federal interests and investment.

4. Repayment contracts on projects in financial difficulties be revised to prevent default.

5. The Bureau of Reclamation be given sufficient funds to complete projects in the west necessary for the adequate development of water resources.

6. Congressional limitations on the Bureau of Reclamation personnel be relaxed.

The association further reaffirmed its opposition to the creation of federal regional authorities and asked that integrity of the water laws of western states be preserved. The group asked for a return to the traditional concept of repayment contracts whereby continuing rights to the use of water may be required under the existing state laws.

Charges "dictatorial" powers

It was the charge that the creation of "regional committees" or authorities was a move to give the U. S. Department of the Interior "dictatorial" powers, which brought the first federal-association clash. Harry E. Polk, Willis- , N. D., president of the assocation made the accusation during his address to the convention, and it drew loud denials from William E. Warne, Assistant Secretary of the Interior in charge of reclamation.

Mr. Warne said there was no basis for the charge; that the committees were approved by congress, and could always be congressionally controlled. Mr. Warne also stated the purpose of the committees is not to "supervise", as Mr. Polk has charged, rather they are strictly a "co-ordinating" committee group to speed up plans and projects on a local or regional basis.

Straus counters for USBR

In a vitriolic attack on tactics of the association, Michael W. Straus, Commissioner of the Reclamation Bureau, declared a "power lobby" is attempting to use the NRA as a "camouflage for monopolistic interests." Mr. Straus pleaded with the association to rid itself of "powerful corporations or their agents and employes who paid a good price for admission and claim the paymaster's time-honored privilege of calling the tune."

Mr. Straus, whose tenure as commissioner will expire Feb. 1 unless Congress acts to save him (because a rider written into the Reclamation Appropriation bill lopped the commissioner off the government payroll at that time because he is not an engineer by profession), said the fight over the administration's power policy has been going on for 16 years and "giant strides have been taken to bring about new industry and a better way of life in the west."

He said Reclamation's hydro-electric development must be continued to make the big irrigation projects economically feasible "because power is the paying partner." He also charged some members of the 81st congress have pledged themselves to reverse the public power program after efforts to do so in the 80th session failed.

The association pledged itself to support the fight for appropriations for continuation of transmission-line building, stressing as its reason that "there exists a serious shortage of power in the west."

E. W. Rising, vice-president of the National Water Conservation conference, Washington, D. C., said that while their views might differ on the issue, there is no quarreling with the fact that "every section of the U. S. is short of power."

All officers of the association were reelected by the board of directors, and three new board members were named.

Reelected were Mr. Polk, Clifford H. Stone, Denver, first vice-president; J. E. Sturrock, San Antonio, second vice-president; H. Maurice Ahlquist, Touchet, Wash., treasurer; William E. Welsh, Boise, Idaho, field representative, and Don McBride, Washington, D. C., secretary-manager.

New board members are Earl Bower, Worland, Wyo.; C. Petrus Peterson, Lincoln, Neb., and Robert E. Lusk, Huron, S. D. Salt Lake City was selected as the 1950 convention site.

Issue 1948-54 Reclamation program

The Bureau of Reclamation has produced another long-range project planning report. This one is for the record. It went to Congress this week.

It is a handsomely-printed document listing some 250 irrigation and multi-purpose projects. These jobs would require a total investment of $3.89 billion in the fiscal years 1948 through 1954, the bureau estimates. Results would include the irrigation of 2,020,000 additional acres of land, supply of supplementary water for 3,610,000 acres already under irrigation, and addition of 4,324,450 kw. of generating capacity in federal power plants.

The seven-year report was prepared for the House Public Lands Committee at the request of its chairman, Rep. Richard Welsh, California Republican. The document is less detailed than the 10-year power program prepared by the bureau for its own use only, and it puts more emphasis on irrigation work. The 10-year program called for addition of 7,392,600 kw. of new generating capacity at a cost of $1.42 billion (*ENR* Aug. 12, p1).

Subject to Congressional appropriations, the new report contemplates annual expenditures ranging from $204 million in fiscal 1948 to $781 million in 1953. Actual appropriations for the reclamation program for 1948 totaled $149 million.

Increase of the generating capacity of bureau power plants from 2,223,487 kw. to 6,547,937 kw. in the seven-year period would boost annual generation from 13-billion kwh. to more than 30-billion kwh. Gross annual power revenues would jump from fiscal 1947's total of $22,472,000 to $64,000,000 in 1954, the bureau estimates.

FOREIGN DEVELOPMENTS

RUBBLE CLEARING has begun on the banks of the Thames in London in an effort to prepare this site—between Westminster and Waterloo bridges—for the 1951 Festival of Britain. Cost of the clean-up is about $8,000,000. (British Combine Photo)

England—Redevelopment of the south bank of the River Thames in London has been started, in preparation for the planned Festival of Britain, to be held in 1951 (centenary year of the Great Exhibition of 1851).

Plans for the work, which will include clearance of a whole rubble-strewn area and extension of the embankment 110 ft. into the river over a 1,700-ft. distance, have been approved by the London County Council.

A retaining wall is to be built along the river between Westminster Bridge and Waterloo Bridge as a 1,700 ft. extension of the existing wall. This structure will require 20,000 cu.yd. of concrete and will be faced with granite. Plans call for reclamation of 4½ acres of land by this extension of the south bank of the river. This land will be put to immediate use during the Festival and then will ultimately be turned into public gardens. The wall itself is to be started early in 1949 and completed by the end of 1950.

Just north of the reclaimed section is the site of a new concert hall—largest single-cost item in the immediate plan for London's south bank development. The hall will be constructed at a cost approximating $50,000,000.

Immediate partial redevelopment is but a part of the County of London Plan. This plan points out the fact—recognized as early as 1888 when the London County Council was born—that the river's south bank has been slow and backward in development, while the opposite shore was lined with a spacious road and magnificent buildings.

While the present work is hardly a great engineering undertaking, it is taken as the beginning of a movement which may eventually take in the entire south bank as far as London Bridge. The long-range plans, which will be in for a great deal of controversy when and if they are to be realized, include two new highway bridges over the Thames and removal of all railway crossings. High level railways in the whole area on the river's South bank would also be eliminated according to the plan.

Public Construction

Argentina—Buenos Aires plans a new municipal auditorium of which the most interesting feature from a construction viewpoint will be the use of sheet aluminum over a reinforced concrete structure. The auditorium will have a capacity of 20,000 people and will cost an estimated $5,000,000. The design includes unique lighting systems, sound amplification and electrically controlled scenery. The balcony, seating 10,000 persons, will be reached through separate entrances.

The city also plans a $6,000,000 municipal market which is expected to be completed by the end of 1949. This building will replace the 100-year-old produce market in the center of the city. The market will occupy the main floor of a modern nine-story building; the upper floor space will be occupied by offices.

Colombia—Contracts for the completion within 26 months of a flood control dam near Bogota have been awarded to Winston Brothers and Raymond Concrete Pile Company. Water from the project will be used to irrigate 25,000 acres of land.

Miscellany

Germany—According to recent reports, the former Messerschmidt aircraft factory at Augsburg is now building pre-fabricated houses. Production is expected to reach ten buildings a day during 1949.

England—Board of Trade officials here have recently announced that separate import licenses will be required for import into the U. K. of architectural or engineering designs where payment is involved. Those of no commercial value may, however, continue to be brought in without restriction.

Saudi Arabia—A change in design to increase the capacity of the Trans-Arabian pipeline to 500,000 barrels of oil daily has been adopted. Six auxiliary booster pump stations will be built to reinforce Tapline's initial six pump station project, which will have a capacity of 300,000 barrels.

Company officials say these additional plans will not materially change the steel requirements for the line. The original project will require 323,000 tons while 42,000 tons more will be needed for the new plans. The increase was adopted because of recently revised forecasts of petroleum needs of western countries.

Russia—Artificial granite capable of withstanding pressure of 170 lbs. per sq. in. and suitable for use in bridge and building construction has been reported invented by the Russian engineer A. I. Imil, associated with the laboratory of the Soviet Bridge Trust.

Stated to be ten times cheaper to produce than natural granite, the artificial material can be produced in blocks of any desired form either at special yards or on construction sites in a manner similar to the output of prefabricated reinforced concrete blocks.

The artificial granite is said to be the product of ten years research effort in search of a granite substitute by engineer Imil, who has taken out a patent and a certificate of priority in development of this new building material.

ENGINEERING SCHOOLS

Revised courses at Wisconsin—Technical writing integrated with other courses at R. P. I.—Soil asphalt base research at Oklahoma.

Revised Concrete Courses

The Extension Division of the University of Wisconsin, at Madison, announces that two of its courses in concrete construction have been revised in order to base them on the 1947 Building Code of the American Concrete Institute. The subjects are "Principles of Reinforced Concrete," for which three credits (transferable) may be obtained, and "Reinforced Concrete Fundamentals," a non-credit course.

The revisions take account of changes in the allowable stresses of steel and concrete, and of changes in the methods of designing: slabs supported on four sides, flat slabs, and footings.

These and other technical courses taught by correspondence are available from Wisconsin's Extension Division to persons in any state or country.

Technical Writing

A new plan aimed to teach students to write and think clearly on technical subjects has been introduced this fall at Rensselaer Polytechnic Institute. Based on the principle that technical writing can be taught best together with technical subjects themselves and not separately in an English classroom, the program is a new departure. The course is under C. H. Gray, head of the department of English. The new training will be presented in connection with the courses given each semester by the ROTC and NROTC departments, Dr. Gray explains.

Technology Building

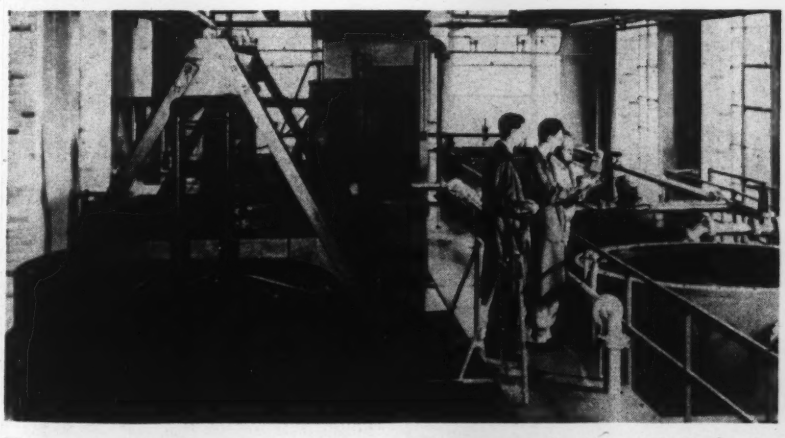
The Volpe Construction Co. of Malden, Mass., has been awarded a contract for construction of the University of New Hampshire's new technology building. The bid was $874,339. The architect is Arland A. Dirlam of Boston. The building will be the largest at Durham, containing approximately 1,000,000 cu. ft.

Asphalt Base Research

The Oklahoma state highway commission and Oklahoma A&M College experiment station at Stillwater have entered into a partnership to conduct an extensive soil asphalt base research project, State Highway Director H. E. Bailey announces.

The work will be carried on under the direction of J. Rogers Martin, in charge of the station's asphalt laboratory, and George E. McCamy, chief of the state highway department's testing laboratory. Field studies, sampling, testing and analysis will be performed by Mr. Martin and his staff and by department personnel. It is estimated the cooperative effort will extend over a 1-year period and upon completion the results and findings will be published.

Director Bailey said it is believed that the results obtained from the study will permit the selection of that type of improvement on a large mileage of highway system located in areas where soils permit satisfactory treatment with asphalt.



Three students in the sanitary engineering laboratory at the New York University college of engineering examine a sample of effluent taken from a large settling tank containing New York City sewage. In this modern pilot plant biological methods of treatment are developed whereby stream pollution may be avoided. The door in the background leads to a room where chlorine is used to kill harmful bacteria.

Educational Notes

A student from the oldest engineering school in Europe has just enrolled in this country's oldest scientific institution. A French engineer, Gerard Dreyfus, already a graduate of the Ecole Nationale des Ponts et Chaussees, is now studying at the Harvard Graduate School of Engineering, successor to the Lawrence Scientific School. Both of these schools have within the last year celebrated their anniversaries—the French school its 200th and Harvard its 100th. While studying soil mechanics and foundations, Mr. Dreyfus will hold a fellowship named in honor of Charles Storer Storrow, the engineer who drew up plans for the Lawrence Scientific School. Storrow also was a graduate of the Ecole Nationale des Ponts et Chaussees.

A scholarship—$810 a year for three years—at the college of engineering, Louisiana State University, has been awarded to Miss Janet Himbert of Baton Rouge. The scholarship was awarded on the basis of her academic achievement during his first year of engineering studies.

Stevens Institute of Technology, Hoboken, N. J., has awarded scholarships this semester to 62 students.

The University of Florida in cooperation with the state and federal mapping agencies in Florida, the Florida State Road Department, the Florida Section of the American Society of Civil Engineers, the Florida Engineering Society and the Florida Real Estate Commission, held a surveying and mapping conference recently which was attended by 200 civil engineers, surveyors, engineering students and realtors.

Ford L. Wilkinson, Jr., on Jan. 1 will become president of Rose Polytechnic Institute, Terre Haute, Ind., succeeding Donald B. Prentice, who resigned last July. Since March, 1947, Wilkinson has been academic dean of the U. S. Naval Academy post graduate school at Annapolis, Md. Previously he was dean of the Speed Scientific School of the University of Louisville, Ky. He went to Speed in 1934 from the faculty of the University of Tennessee. He is a 1917 Naval Academy graduate and did graduate work at Columbia.

MUNICIPAL AFFAIRS

A concerted drive that combines public education programs with strict enforcement measures aimed both at pedestrians and autoists has made Detroit, Mich., one of the safest cities in the U. S., the National Safety Council said last week.

According to a report published in ETHYL NEWS, Detroit today has more than twice the number of motor vehicles on its streets than it had 20 years ago, but traffic fatalities have dropped by half under figures of 28 years ago. For several years, the Safety Council said, Detroit has had a decreasing death rate per 10,000 registered vehicles, and in the first six months of 1948 the figure was only 3.2 deaths.

By comparison, traffic fatalities in the nation's five largest cities were: Chicago, 8.1; New York, 6.1; Philadelphia, 4.6; Los Angeles, 4.2 and Detroit, 3.2.

Parking Matters

The provision of off-street parking space as a means of easing traffic congestion continued to be one of the chief problems confronting municipal officers. Developments during the week included:

The commissioners of the District of Columbia revived a plan for razing 11 antiquated buildings adjoining the Municipal Center to provide parking lots.

The Port of New York Authority distributed a map showing where and when to park in lower and midtown Manhattan. The location of all off-street parking places, both public garages and parking lots, in the area from the lower end of the island to 59th St. is indicated in color. Also shown are the areas in which curb parking is prohibited for police, and streets in which one-hour parking is permitted.

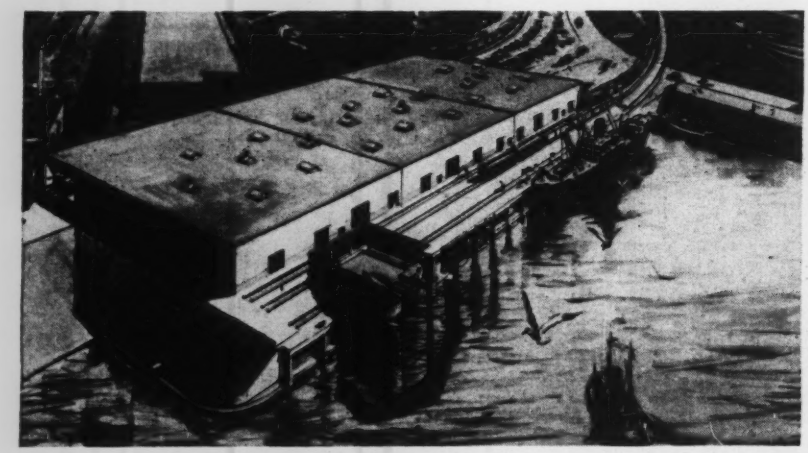
In North Dakota, voters approved a ban on parking meters, but the state supreme court took under advisement a suit on constitutionality of the ban.

Upper Sandusky, Ohio, planned to install 250 parking meters, while installation of meters in municipally-owned parking lots is being considered at Adrian, Mich. Marion, Ohio, will install 450 additional meters. Montgomery, Ala., will try out parking meters for downtown areas for six months. In the first month of operation, 575 meters in Calgary, Alta., collected almost $5,000.

But in Massachusetts, both the supreme court and the legislature ruled that public highways cannot be turned into "business for profit" and that meter receipts must be used only to meet the cost, maintenance and supervision of the system. Local authorities, with surpluses in hand from the meters, sought to use the money for other purposes.

Further information on new parking regulations in Dayton, Tenn., (*ENR* Nov. 4, page 10) is that on any lot on which a business building is hereafter built, there shall be a front yard not less than 20 ft. in depth, and a rear yard not less than 15 ft. deep, and behind every business building there shall be provided space, either inside or outside the bulding, for loading and unloading of vehicles, which space shall be provided with access to an alley or street.

A new formula for establishing parking lots in shopping sections of New York City has been submitted to the Board of Estimate. Under this "Jamaica Plan," the city would acquire the needed land by condemnation, grade and surface the lots and assess the entire cost against the local merchants. Private home owners within the area would be specifically exempt from the special levy.



MAJOR WHARF STARTED at Houston, Tex., will be completed in 18 months on a $1,735,000 construction contract let to R. P. Farnsworth and Co. Design —by Lockwood and Andrews of Houston—calls for cellular sheet steel cofferdams, serving as bulkheads, under the entire apron. The 500-ft. by 250-ft. wharf will carry a warehouse, a 500-ft. loading platform and two railroad tracks.

Seattle Sewer Trouble

The Washington State Pollution Control Commission has ordered Seattle to cease all work on portions of a $795,000 sewer project. The work is an overflow chamber and an overflow line to Channel No. 2 of Union Bay, an arm of Lake Washington. The storm overflow would pour raw sewage into the shallow waters of the bay and "result in a further pollution of Lake Washington detrimental to public health and public enjoyment of that water," the commission declared.

City Engineer R. W. Finke said his office had explained to the commission last month that the overflow unit would be necessary, regardless of the ultimate disposition of the storm water, in order to provide sewer service for hundreds of homes in the drainage area. The commission's order asserted the city had ignored the commssion's findings and proceeded with the work although approval of the overflow chamber and line had been "specifically withheld."

The city contends that the salt waters of Puget Sound bordering the city are adequate to take the city's sewage without pollution and without extensive sewage treatment. The state has contended that additional sewage treatment faciliies must be established by the city, or Puget Sound will be polluted.

The city's position was largely upheld by a survey conducted by Dr. Abel Wollman of Johns Hopkins University. The state pollution control commission has announced it will take up Dr. Wollman's report at its next meeting.

Anti Air Pollution

The Minneapolis, Minn., city council, which has had a special committee studying the problem for the last six months, will consider soon a new air pollution ordinance patterned after the revised ordinance of St. Louis, Mo. Approval is expected.

Akron, Ohio, and the major rubber firms there are considering a plan to cooperate on a giant new incinerator,

which would burn obnoxious rubber scrap as well as the city's rubbish and garbage, and would replace the city's present incinerator.

Public Works

A $4,500,000 program, embracing a variety of projects to be undertaken in Pittsburgh, Pa., next year, has been submitted to the city council for approval.

Baltimore, Md., city officials hope to start construction during 1949 on the building of street, bridge, school, sewer and water projects to cost about $40,000,000.

Asheville, N. C., is considering five major projects in an $11,000,000 long range program including expansion of water system, school building, sewage disposal plant, stream pollution remedies, airport and public housing.

Tallahassee, Fla., bought a 52-acre site on St. Marks River for a $5,000,000 municipally-owned power plant. Columbus, Ohio, had a $6,500,000 school building program well under way.

Arnold V. Finch, city engineering commissioner of Toledo, Ohio, has submitted a proposed $13,214,541 program for paving 877 unimproved or partially improved streets.

Edmonton, Alta., dropped its former pay-as-you-go policy and plans to borrow $41,178,488 for new public works and utility extensions. Among the items are utility extensions, $14,464,219, sewer extensions, $17,125,000, new public services, $7,160,000; new separate schools, $1,000,000; and for other civic departments, $1,429,000.

Building Codes

Four cities took action to modernize their codes.

Montreal, Que., approved a new city building code revised to meet present day needs. It replaces the building by-law of 1901 and the 47 later amending by-laws.

Sections of the Birmingham, Ala., code providing that gas fitters can install up to 10 ft. of water pipe have been held invalid in the Chancery Court. Judge E. M. Creel said that the installation of water pipe in connection with the replacement of any gas appliances was contrary to state law.

City council committeemen promised that the new building code of Akron, Ohio, will pay its own way. The fees charged for inspections will be sufficient to pay all expenses of the building department, which has operated in the red under the old code.

South Bend, Ind., is planning to drop its 25-year-old zoning code and create a new one.

STATE STREET BRIDGE in Chicago, which has been under construction for nine years, nears completion. Started with the removal of its predecessor in 1939, and seriously delayed by the war, the bascule structure over the Chicago River will be completed early next year. The bridge has an overall width of 108 ft. and a 210-ft. clear span between masonry piers. Two 75-hp. electric motors operate each of the 4,200-ton leaves carried on roller-bearing trunnions.

Airport Work

The Jamestown, N. Y., city council authorized McFarland and Brown, Binghamton, N. Y., to make a survey and prepare plans for expansion of Jamestown Municipal Airport, in one of many actions as municipalities sought to improve their facilites for air transport. Other action was:

Spending $637,250 for construction of an administration building and lengthening of the instrument landing runway at Port Erie, Pa., was recommended by airport engineers.

The city council of Fort Worth, Tex., authorized drawing of plans by Wyatt C. Hedrick for the runways, aprons, sewage and water systems, and the illumination and roads of the $11,500,000 greater Fort Worth International Airport at Arlington. The two runways will be 6,400 ft. long, according to W. O. Jones, Fort Worth city manager.

The Milwaukee County, Wis., board approved a three-year, $4,400,000 improvement at the Billy Mitchell Field and the Curtiss-Wright airport. One half of the costs will be paid by the federal government, one-quarter by the state, and one-quarter by the county.

Municipal Briefs

The Muncie, Ind., City Plan Commission is now at work on a comprehensive school, park and recreation plan for the city and environs.

A study made by the Civil Service Assembly and the International City Managers Association shows that 66 percent of the governmental subdivisions reporting increased the pay rate of public employees between January and July, 1948.

Florida municipalities are spending about $15,500,000 a year on their streets and bridges.

The utility board of Tulsa, Okla., ordered a survey for a proposed large sanitary sewer system for an eastside area slated for annexation.

Seattle, Wash., asked the Federal Power Commission to amend its license for the Ross and Diabolo hydroelectric developments on the Skagit River by adding proposed changes and additions to its present Gorge power development. Cost would exceed $9,550,000. At the same time the gas and electric department of Holyoke, Mass., has asked the commission to issue a 50-year license authorizing construction and operation of a hydroelectrc plant at an existing dam owned by the Holyoke Water Power Co.

A campaign to complete the partly built Cincinnati, Ohio, subway is under way, championed by the Fourth Street Area Merchants Association, headed by Joseph Barg, who says $6,000,000 has been spent on subway construction.

The Town of Rye, N. Y., has constructed a new $100,000 town hall without any additional tax levy and at exactly the originally estimated cost. The money came from surplus funds, amplified by sale of tax liens.

MEN AND JOBS

Samuel Murray, resident engineer for the Union Pacific at Portland, Ore., has retired after having been in that city since 1914 and with railroads since 1902. He plans to engage in private engineering practice. A 1902 civil engineering graduate of the University of California, he first worked as a structural iron worker on bridges being constructed by the Southern Pacific in Oregon. He went to the Southern Pacific offices in San Francisco in 1904 and two years later to the headquarters of the Harriman Lines (Union Pacific-Southern Pacific) in Chicago as chief draftsman. Mr. Murray became bridge engineer for the Los Angeles & Salt Lake Railroad in 1907 and for the Union Pacific (then Oregon & Washington Railroad Co.) in 1909. He became chief engineer for the Oregon-Washington Railroad & Navigation Co. in 1916. Working from 1916 to 1923, he successfully stabilized the Ruckel slide area along the Columbia River.

Maj. Joseph S. Grygiel has been appointed resident engineer and **Glen A. Barcroft** project engineer on construction of a veterans' hospital at Seattle, Wash., for the U. S. Engineers. The contract has been awarded to the Sound Construction & Engineering Co. for $6,077,320. Major Grygiel has been assistant to the district engineer, while Barcroft formerly was resident engineer for the Puyallup River bridge and flood control project at Tacoma, Wash.

During Secretary of the Interior Julius Krug's recent swing through the West he was photographed while visting Shasta Dam, integral unit of California's Central Valley project. Seen with the secretary are, W. J. McCrystal, left, bureau construction engineer at Shasta, and Ben W. Creim, power manager for the bureau's Region II.

Albert G. Wyler, principal assistant to the city engineer of New Orleans, La., since 1935, has been made city engineer, succeeding the late N. L. Marks, Jr. **Louis M. Buja** has been promoted from office engineer to principal assistant; **Charles E. Cassagne, Jr.,** from design to office engineer; and **George E. Bisso** from survey and research to design engineer.

Alfred Hedefine, formerly associated with the firm of Hardesty and Hanover, has joined the staff of Parsons, Brinckerhoff, Hall and Macdonald, consulting engineers of New York City.

Nolan D. Mitchell has been appointed chief of the fire protection section of the National Bureau of Standards. He will direct further research for the building technology division on problems of fire-resistance in the design and construction of buildings and building materials.

Sigman & Farkas, consulting engineers, have moved to larger offices at 150 Broadway, New York 6, N. Y.

G. Lickton has been appointed city engineer of West Palm Beach, Fla.

New engineer-president of Columbia Steel Co. is Alden G. Roach, shown here flanked by Irving S. Olds, left, chairman of U. S. Steel Corp. board of directors, and Benjamin F. Fairless, Big Steel's president. Photo was taken at Columbia's Pittsburg, Calif., plant shortly after Roach's appointment was announced. Mr. Roach is a B.S. in civil engineering from the University of Illinois, 1923.

Three Bureau of Reclamation chief engineers, present and former, got together for a confab in Denver recently. They are, in the usual order, S. O. Harper, chief engineer from 1940 to 1945; L. N. McClellan, present chief engineer; and Walker R. Young, chief engineer from 1945 to 1948. Before 1940 only four men had served as chief engineers of the Bureau of Reclamation since its formation in 1902. The other chief engineers were F. H. Newell, A. P. Davis, F. E. Weymouth, and R. F. Walter.

Survey of building codes shows many are too old

(*Continued from p. 7*)

building officials is that they thus become lawmakers and judges of their own laws.

Cleveland, Ohio, which has 24-year old regulations, started work on its new code under Building Commissioner William D. Guion, but hit a snag in public hearings. After more than four years of fruitless attempts, the city, late in 1946, employed Emil J. Szendy building code consultant, to write the code.

A first draft was completed about a year ago, public hearings were held, and this draft was revised. Since then, 32 public hearings have been held by the city council. After a few minor alterations have been made, the code will be acted upon by the lawmakers.

New Code for Philadelphia

Philadelphia's new code, completed this summer to replace regulations adopted in 1929, was assembled by a seven-man committee of city officials, assisted by 90 private architects, engineers, manufacturers' representatives and designers, who worked without compensation. The old code had been severely criticized as antiquated. The new code is described by George U. Siegrist, chief of the bureau of building inspection, as an effort to "bring us up to date but to keep us from going haywire until we are sure that something has been proved."

Studies have been under way in Wilmington, Del., for several years aimed toward revising building regulations promulgated in 1936. These have been directed by the mayor's 13-man building-code committee and the managing committee of the Construction Industries Section of the Chamber of Commerce. But no action has been taken, and because of the huge task involved, it does not appear that any major overhauling of the code is in prospect in the near future.

In Chicago, with an appropriation of $100,000, a board of consultants headed by John O. Merrill, of Skidmore, Owings & Merrill, architect-engineers, has been hard at work for two years drafting a new code for that city. Attempting to write performance-standards regulations, the group has been under heavy fire from labor unions.

Public hearings, however, have recently been completed on the technical sections of the new regulations and hearings started on the administrative portions. The technical sections are in the hands of a city-council committee and are expected to be presented to the lawmakers shortly.

Urge $91 million Phila. port work

An engineering and financial report that recommends the establishment of a port-authority-type organization for the Philadelphia-Camden area on the Delaware River, and the eventual expenditure of $91,000,000 was submitted this week to the Delaware River Joint Commission.

The report recommends, among many other projects, the construction of a $43,000,000 suspension bridge that would have a 2,050 ft. center span, connecting South Philadelphia and Gloucester, N. J.

Prepared by the Knappen Tippetts Abbett Engineering Co. of New York City, the report is an exhaustive study both of engineering details and of legal and economic factors involved. It recommends that the legislatures of New Jersey and Pennsylvania extend the functions of the joint commission—now limited to the operation of the existing Philadelphia-Camden Bridge—to include a twelve-county area bordering the river in the two states. In addition to building and operating bridges and transportation facilities, the commission would also be charged with operating the port of Philadelphia itself, taking over jurisdiction of city-owned piers and wharfage facilities both in Philadelphia and Camden, on a rental basis.

Other functions would include an aggressive advertising and promotion campaign to attract shipping business to the port. Declining tonnages of materials handled by the port facilities was one of the basic reasons for the study.

In addition to recommendations for the new bridge and for changes in the legal and administrative set-up of the commission, the report recommends construction of a $35,000,000 marine terminal, if existing terminal facilities owned by the two cities are not obtainable; construction of a $12,500,000 port or belt-line railroad to connect the yards of the three major lines serving the area; building of a $2,125,000 "pilot model" union truck terminal; and the eventual construction of a $32,000,000 rapid transit system in southern New Jersey, to bring suburban residents into Philadelphia over the new bridge.

Also included is a recommendation for the purchase of two bridges—the Tacony Palmyra and Burlington-Bristol bridges in Burlington County—purchase of which by Burlington County recently has stirred up a storm of controversy between the state of New Jersey and the Burlington County Freeholders. (ENR *Nov. 11, p. 74*). The report submitted points out that under previous New Jersey laws under which the two bridges were built, the state could have purchased them by condemnation for $4,900,000. Burlington County reportedly paid $12,000,000.

Steelmakers to continue allocations

Since the recent elections, steel producers have done an about-face on their decision to terminate voluntary allocations on Feb. 28—when the Taft-Wolcott Act (Public Law 395) expires.

In meetings last week with the Department of Commerce Office of Industry Cooperation, the Steel Products Advisory Committee has approved continuation of five programs marked for suspension, and has assured acceptance of four new allocation schedules.

Up to election day, the steel producers had intended to cut off all allocation programs Feb. 28, except three in the national defense categories—atomic energy, miliary items and areonautical research. The law exempts industrial firms from provisions of anti-trust legislation in formulating and carrying out allocations agreements.

Two of the present allocations programs have failed to get approval from the steelmen for continuation. Both of these are related to housing—the 9,830 tons now going to Lustron each month, and 29,170 tons a month going to warm air heating equipment for housing.

The eight programs to continue—calling for 476,800 tons per month—are: Freight cars, 250,000 tons; armed forces, 107,774 per month; oil tankers, 40,380 tons; merchant vessels, 15,190 tons; atomic energy, 20,000 tons; barges, 25,000 tons; oil field tanks and equipment, 16,530 tons; aeronautic research, 1,926 tons. Added to these will be one program approved last week, for 26,000 tons per month to manufacturers of coal mining equipment; and probably three other programs that would provide steel for ore cars, grain storage bins and a gas pipeline to serve the atom plant at Oak Ridge.

Total for all programs is expected to exceed 570,000 tons per month—more than 10 percent of the output of the steel mills. The allocations, of course, do not mean added drain to that degree on the steel supply—consuming industries that will get the allocated steel are already receiving sheets, plates and shapes in substantial quantities.

OBITUARY

George J. Seebach, 67, retired civil engineer, died in Yonkers, N. Y., Nov. 15. A 1905 graduate of Cooper Union, he had been a bridge engineer for New York City and had worked for its Department of Water Supply, Gas and Electricity. He had also been associated with the engineering firm of Voorhees, Walker, Foley and Smith, and designed steel construction for buildings in Radio City.

Edwin F. Allbright, 66, a civil engineer, of Wollaston, Mass., died Nov. 12. He received his civil engineering degree from Massachusetts Institute of Technology in 1905. At his death, Mr. Allbright was secretary and engineer for the Grid Flat Slab Corporation of Boston.

Lewis Franklin Hanbury, Sr., 56, who was for 10 years a civil engineer with the War Department on levees along the Mississippi River, died Nov. 10 at Camp Springs, Md. Mr. Hanbury had also served as a chief engineer for six years with the U. S. Merchant Marine during and after World War I. He also worked on dock installations in Hamburg, Germany, after that war.

Robert T. Lang, 70, general superintendent and director of Brookfield Construction Co., Ltd., Halifax, N. S., died Nov. 7.

Homer J. Wilkins, 65, former engineer for Logan County, Okla., died recently.

M. S. Darling, 79, pioneer Montana surveyor and engineer, died in Los Angeles, Calif., Nov. 6.

William S. Tibbets, 33, engineer who supervised installations on ships at the Bethlehem Steel Co. plant at Sparrows Point, Md., and who was formerly engineer for the Orr Steamship Co., died Nov. 6, in Chevy Chase, Md.

Ralph D. Rader, 62, Montana state highway engineer from 1928 to 1935, and bridge engineer for the state highway department in 1935-36, died Nov. 12 at Berkeley, Calif. Mr. Rader was graduated from the University of Florida engineering school. He went to Montana in 1921 to become resident engineer for the highway department, with headquarters in Bozeman. He remained there four years, and during that time obtained a civil engineering degree from Montana State college at Bozeman. He then resided in Florida from 1925 to 1927, when he returned to Montana as division engineer, becoming state highway engineer the following year. He left in 1936 to accept a position with the Portland Cement Association in Berkeley, Calif., which he retained until his death.

John W. Hardell, 58, former civil engineer, who later became manager of the Barber & Ross Co., building materials firm, and president and general manager of the Hugh Reilly Co. of Washington, D. C., died Nov. 15 in Washington. Mr. Hardell was a graduate of the George Washington University school of engineering.

John C. Sanderson, 75, who retired in 1943 as a member of the engineering firm of Sargent and Lundy, Chicago, died in Evanston, Ill., Nov. 15. He was on the committee which drew up a building code for the Century of Progress exposition.

Walter H. Faget, 58, assistant chief engineer in charge of construction for the Chicago sanitary district, died Nov. 14.

Hayward McCarthy, 59, construction superintendent, died Nov. 14 in Greenwood, Mass. He had been connected with the Aberthaw Construction Co. of Boston and the Morton C. Tuttle Co., also of Boston, and for some years was with the Tennessee Valley Authority as construction superintendent, for building the complete town of Norris, Tennessee.

Dayton, Ohio, society files fifth injunction suit

A petition seeking to enjoin a New York firm and its members and their Dayton representative from "continuing to violate the Ohio Engineers Registration Act" has been filed in Montgomery County Common Pleas Court by E. L. Luaces, Chairman of the Committee on Professional Practices and Violations of the Ohio and the Dayton Societies of Professional Engineers.

Defendants are Charles M. Zust, Lloyd M. Smith, Kenneth Cariter, Percy E. Foster, Joseph E. Anderson, Robert Weber, Walter Pollard, and Charles T. Cubellis, individually and doing business as Charles M. Zust Co. at 350 Fifth Ave., New York City, and John S. Kirk of 4318 North Main St., Dayton, who represents the other defendants in the Ohio territory.

According to the petition, none of the defendants is admitted to practice in Ohio, but they have been actively prospecting for business in Dayton and vicinity for more than a year, and previously have been made aware of the requirements of the law.

The firm operated by the defendants is said to offer to do industrial engineering work, and according to its printed contract will determine "actual routines and policies now in operation (in client's business) including a constructive analysis of such factors as organization, administration, operations: plant and production, office routines, inventory and expense control, personnel, sales, marketing, cost reduction and tax savings" for a flat fee of three hundred dollars.

This is the fifth action of this nature filed by the Dayton Society, a chapter of the Ohio Society of Professional Engineers, during the last year.

MAJOR MEETINGS

Southeastern section American Water Works Association, Sheraton Bon Air Hoted, Augusta, Ga., Dec. 6-8.

Highway Research Board, National Academy of Sciences and National Research Council, 2101 Constitution Ave., Washington, D. C., Dec. 7-10.

National Society of Professional Engineers, annual meeting, Sherman Hotel, Chicago, Ill., Dec. 15-18.

Materials Handling Exposition, Convention Hall, Philadelphia, Pa., Jan. 10-14.

American Society of Photogrammetry, annual meeting, Shoreham Hotel, Washington, D. C., Jan. 12-14.

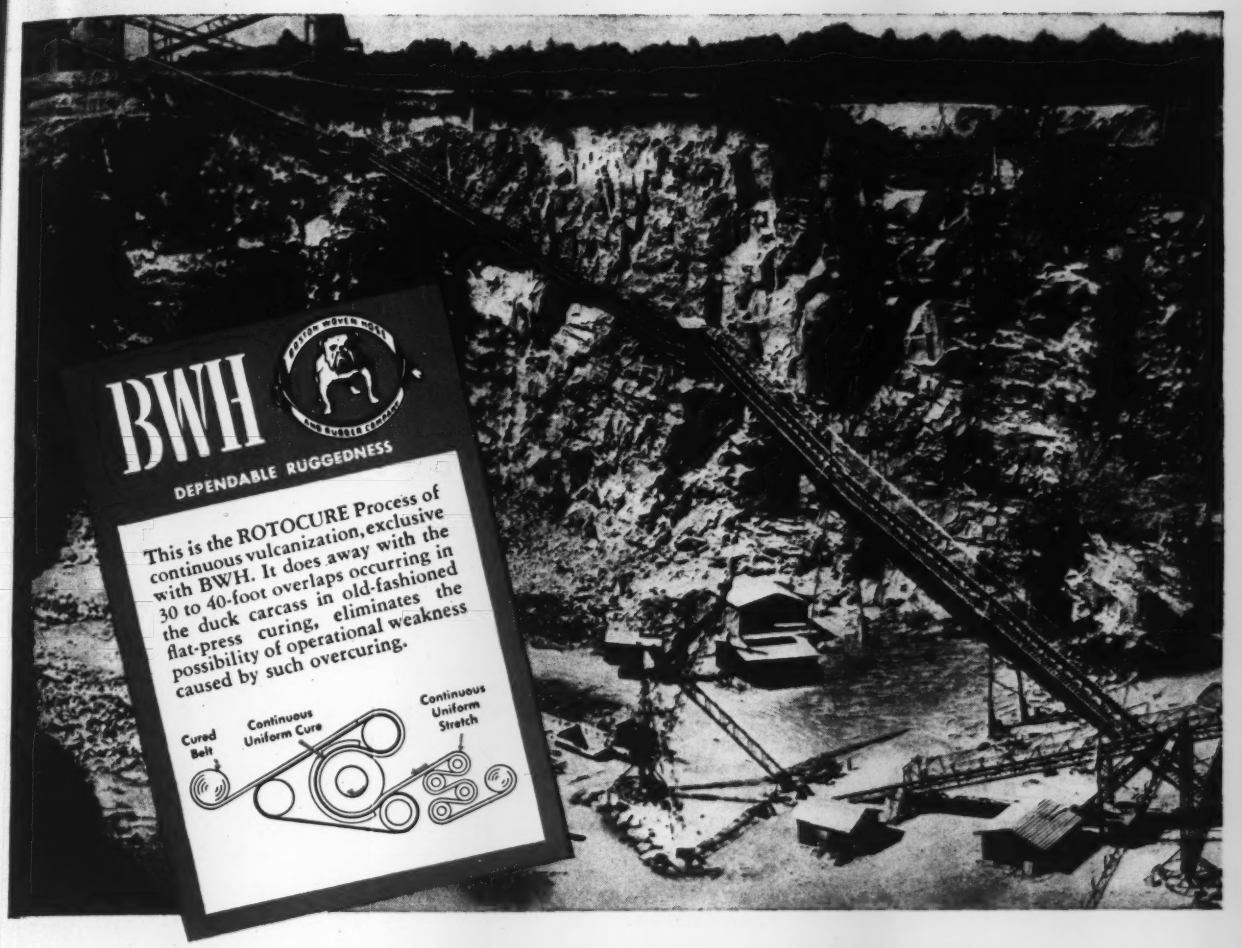
Associated Equipment Distributors, annual meeting, Stevens Hotel, Chicago, Ill., Jan. 16-20.

Canadian Construction Association, Royal York Hotel, Toronto, Ont., Jan. 23-26.

Talk slum clearance plan for Boston, Mass.

Mayor James M. Curley of Boston, Mass., has c lled a conference of the Boston Housing Authority and the planning board to discuss a comprehensive program of slum clearance. The mayor said that detailed plans will be prepared so that Boston can be first to file its program upon passage of federal legislation.

"A large-scale federal housing program would create an opportunity to remake the city," the mayor said. "If we can wipe out slum areas we may possibly effect a saving of 20 percent in the cost of conducting the city's activities. At least 40 per cent of the fire, police, and health problems, can be traced to slum areas, which represent 6 percent of the city's tax income, but cover 20 percent of the area."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1. ROTOCURE eliminates the press overlaps which occur in the duck carcass every 30 to 40 feet in belts made in a flat press. Such overlaps, according to scientific tests, may reduce flex life as much as 40%.
2. ROTOCURE eliminates uneven stretch, because this method maintains constant, uniform stretch control throughout the curing process.
3. ROTOCURE eliminates overcure caused by press overlaps in rubber covers of conveyor belts and makes them uniformly abrasion resistant.
4. ROTOCURE eliminates mechanical distortion which is a common occurrence at press ends in flat-press curing.

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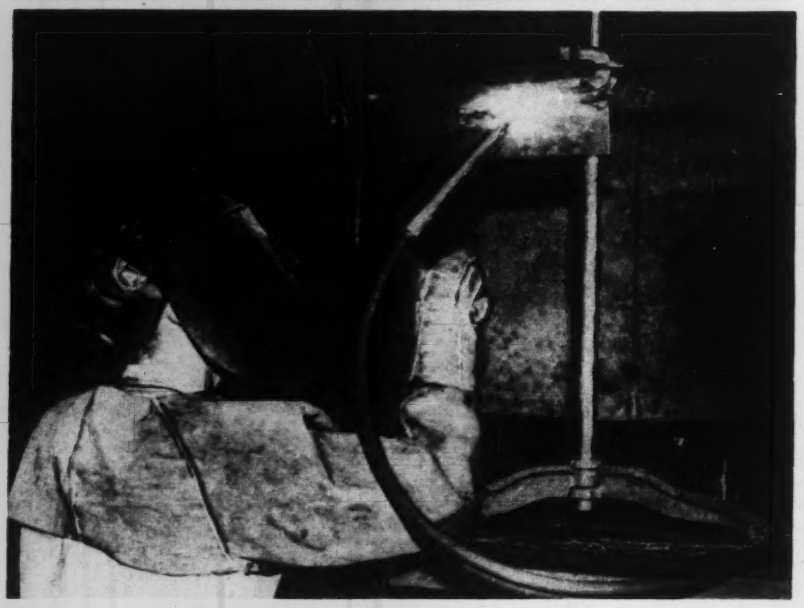
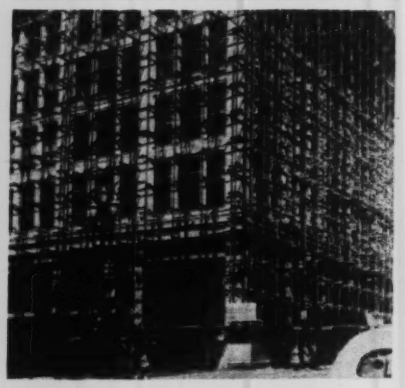


Aluminum Welding Process

A new "Aircomatic" process recently introduced by the Air Reduction Sales Company may be used for welding heavy sections of aluminum and aluminum alloys at wire feed speeds ranging from 100 to 300 in. per minute, permitting deposition rates far exceeding those attained by usual welding methods. A gas-shielded metal arc method of welding, this new process consists of feeding a consumable wire through a manually operated welding gun. The metals being welded are shielded from the air by an inert gas. The advantages of this process include: Manual welding with the essential features of automatic welding; continuous deposition of filler metal at high rates; manual manipulation of an automatic process for welding in a vertical and overhead position; high quality weld metal deposits; deep penetration; no flux required; and no blind welding. Application to other metals is now under development.—Air Reduction Sales Co., 60 E 42nd St., New York 17, N. Y.



Scaffolding Connectors

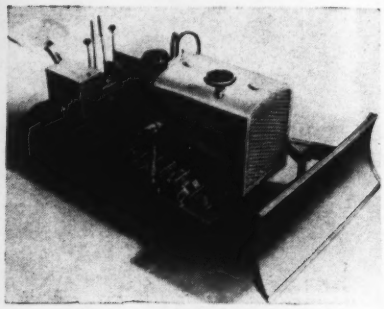
In remodeling the J. C. Penney store in Seattle, Wash., pictured above, "Knife-Grip" connectors were used on the scaffolding. This device eliminates nails, spikes and bolts, automatically holds scaffolding straight and level, eliminates cross bracing, can be assembled with unskilled labor, and does not damage the lumber, so that it can be used again and again. In the Penney installation the scaffold towered 125 ft. above the street without a single nail driven into the Douglas fir members of which it was made. The uprights were selected straight grained 4x4's, ledgers were 2x6's and stringers 2x4's; all were held in place by the electrically welded brackets and 3-foot steel braces. Smaller jobs use 2x4 uprights and a smaller size Knife Grip.—Knife Grip Products Co., Portland, Ore.

Blueprint Filing Cabinet

Draw-In-Dex cabinet of fire-resistant steel accommodates up to 1000 prints, any of which can be removed or replaced without disturbing the others. Cabinet measures 20x30 in. and is 4 ft. high. Held by suspension rods on hinges, drawings or prints hang smoothly and occupy minimum of space and are properly indexed. Built-in index cards and lock are standard equipment. Colors of cabinet are gray, green, and brown. When cabinet's front panel is opened, rods slide apart so that prints can be removed or inserted in their indexed positions.—Empire Development Corp., 209 Union Trust Bldg., Washington, D. C.

Long-Type Wrenches

Six box wrenches and nine combination box and open-end wrenches with longer-than-standard lengths provide greater leverage, holding power, clearance and reach needed on all types of mechanical assemblies. Six double-end box wrenches have openings from $\frac{1}{4}$ to $\frac{3}{4}$ in. Nine combination wrenches have openings from $\frac{1}{4}$ to $\frac{3}{4}$ in. These wrenches, bearing the trade mark name "Proto" are available in various sized kits.—Plomb Tool Co., Los Angeles, Cal.



The "Beetle" Bulldozer

This bulldozer, small enough to be carried easily in a pickup truck, was designed and built for the U. S. Forest Service for trail building and maintenance in mountainous areas. The Pacific-Western "Beetle" also has been made available for immediate delivery to contractors and builders. It may be used inside buildings for leveling and grading preparatory to pouring concrete floors and also is recommended for landscaping, accurate grading, excavating, back-filling and quantity earth moving where there are space limitations. The one-ton dozer has a hand-operated reversing clutch which requires no gear shifting for reversing direction. Mechanical features include a four-cylinder water-cooled, 15 hp. gasoline engine, reversing clutch, hydraulic blade that may be angled or tilted, electric self-starter, variable throttle control governor and differential type steering. The tracks are made up of steel castings with connections between links being case-hardened steel pins and bushings. Ground pressure is 4.16 lbs. per sq. in. of track contact area.—Western Gear Works, Seattle, Wash.